

10/573789

(c) Amendments to the Claims

Please amend claims 3, 5-7, 9, 14 and 20-22 as follows. A detailed listing of the claims is provided.

1. (Original) An organic light-emitting device comprising an organic layer of a one or more-layered structure comprising at least one compound having a phosphorescence lifetime of 880 ms or more at 77K.
2. (Original) The organic light-emitting device according to claim 1, wherein the organic layer comprises at least one compound having a phosphorescence lifetime of 1100 ms or more.
3. (Currently amended) The organic light-emitting device according to claim 1 ~~or~~ 2, wherein the compound is contained in a light-emitting layer.
4. (Original) The organic light-emitting device according to claim 3, wherein the light-emitting layer comprises at least one host material and at lest one light-emitting material.
5. (Currently amended) The organic light-emitting device according to claim 3 ~~or~~ 4, wherein the compound is a host material.

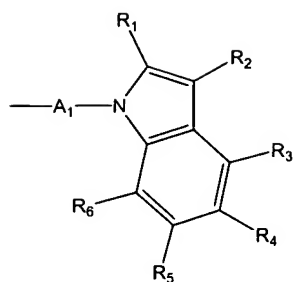
6. (Currently amended) The organic light-emitting device according to claim 4 ~~or 5~~, wherein the fluorescence lifetime at 77K of the host material of the light-emitting layer is  $5.8 \times 10^5$  or more times the fluorescence lifetime of the light-emitting material of the light-emitting layer.

7. (Currently amended) The organic light-emitting device according to claim 4 ~~any one of claims 4 to 6~~, wherein the light-emitting material is a metal coordination compound.

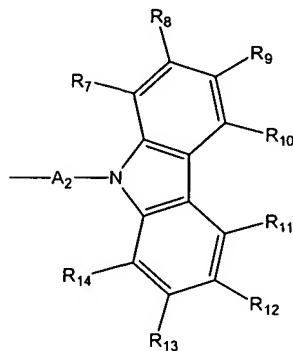
8. (Original) The organic light-emitting device according to claim 7, wherein the metal coordination compound is an iridium coordination compound.

9. (Currently amended) The organic light-emitting device according to claim 1 ~~any one of claims 1 to 6~~, wherein the compound has, in a molecule, at least one partial structure comprising an unsubstituted or substituted indole ring and at least one partial structure comprising an unsubstituted or substituted carbazole ring.

10. (Original) The organic light-emitting device according to claim 9, wherein the partial structure comprising the unsubstituted or substituted indole ring is represented by the following general formula (1), and the partial structure comprising the unsubstituted or substituted carbazole ring is represented by the following general formula (2):



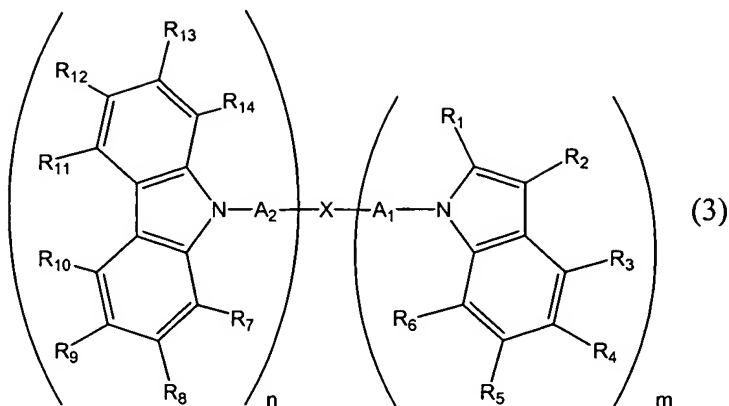
(1)



(2)

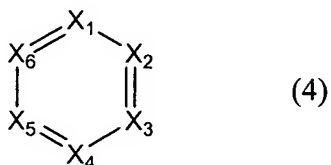
wherein  $A_1$  and  $A_2$  independently represents a single bond, an unsubstituted or substituted arylene group, or an unsubstituted or substituted divalent heterocyclic group; and  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_5$ ,  $R_6$ ,  $R_7$ ,  $R_8$ ,  $R_9$ ,  $R_{10}$ ,  $R_{11}$ ,  $R_{12}$ ,  $R_{13}$ , and  $R_{14}$  are independently selected from an hydrogen atom, a halogen atom, a linear or branched alkyl group having 1-20 carbon atoms (wherein one methylene group or two or more non-adjacent methylene groups of the alkyl group may be replaced by -O-, -S-, -CO-, -CO-O-, -O-CO-, -CH=CH-, or -C≡C-, or one or more methylene groups may be replaced by an unsubstituted or substituted arylene group or an unsubstituted or substituted divalent heterocyclic group, and a hydrogen atom in the alkyl group may be replaced by a fluorine atom), an unsubstituted or substituted aryl group, and an unsubstituted or substituted heterocyclic group, and adjacent ones of  $R_3$ ,  $R_4$ ,  $R_5$ ,  $R_6$ ,  $R_7$ ,  $R_8$ ,  $R_9$ ,  $R_{10}$ ,  $R_{11}$ ,  $R_{12}$ ,  $R_{13}$ , and  $R_{14}$  may be bonded together to form a ring.

11. (Original) The organic light-emitting device according to claim 10, wherein the compound is represented by the following general formula (3):



wherein m and n are independently an integer of 1-5, and the sum of m and n is an integer of 2-6, and X is an unsubstituted or substituted, m+n valent organic group.

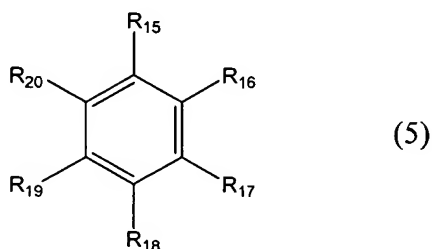
12. (Original) The organic light-emitting device according to claim 11, wherein the compound is represented by the following general formula (4):



wherein  $X_1$  represents a nitrogen atom or C- $R_{15}$ ,  $X_2$  represents a nitrogen atom or C- $R_{16}$ ,  $X_3$  represents a nitrogen atom or C- $R_{17}$ ,  $X_4$  represents a nitrogen atom or C- $R_{18}$ ,  $X_5$  represents a nitrogen atom or C- $R_{19}$ ,  $X_6$  represents a nitrogen atom or C- $R_{20}$ , and the number of nitrogen atoms in  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$ ,  $X_5$ , and  $X_6$  is 4 or less;  $R_{15}$ ,  $R_{16}$ ,  $R_{17}$ ,  $R_{18}$ ,  $R_{19}$ , and  $R_{20}$  is independently selected from an hydrogen atom, a halogen atom, a linear or branched alkyl group having 1-20 carbon atoms (wherein one methylene group or two or more non-adjacent methylene groups of the alkyl group may be replaced by -O-, -S-, -CO-, -CO-O-, -O-CO-, -CH=CH-, or -C≡C-, or one or more methylene groups may be replaced by an unsubstituted or substituted arylene group or an unsubstituted or substituted divalent

heterocyclic group, and a hydrogen atom in the alkyl group may be replaced by a fluorine atom), an unsubstituted or substituted aryl group, and an unsubstituted or substituted heterocyclic group, with the proviso that at least one of  $R_{15}$ ,  $R_{16}$ ,  $R_{17}$ ,  $R_{18}$ ,  $R_{19}$ , and  $R_{20}$  is a partial structure comprising an indole ring represented by the general formula (1) and at least another of  $R_{15}$ ,  $R_{16}$ ,  $R_{17}$ ,  $R_{18}$ ,  $R_{19}$ , and  $R_{20}$  is a partial structure comprising a carbazole ring represented by the general formula (2).

13. (Original) The organic light-emitting device according to claim 12, wherein the compound is represented by the following general formula (5):

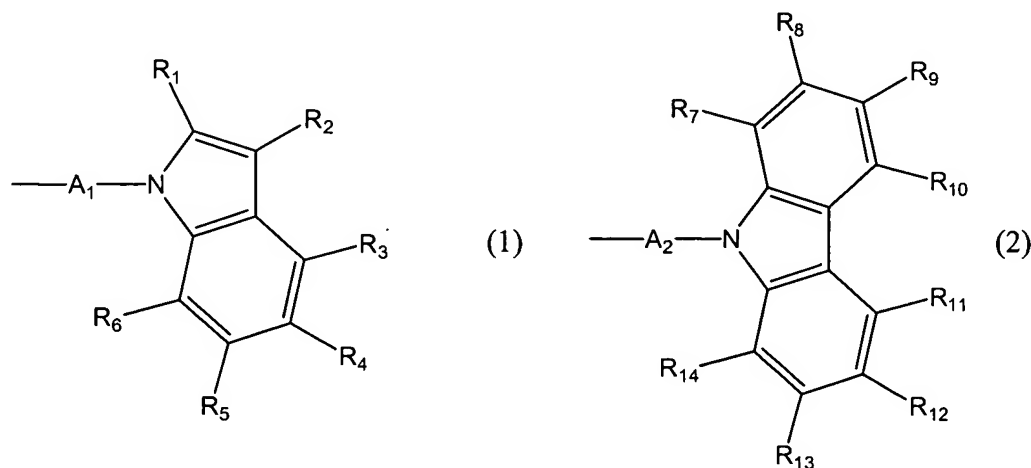


which corresponds to the general formula (4) in which  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$ ,  $X_5$ , and  $X_6$  are all not nitrogen.

14. (Currently amended) The organic light-emitting device according to claim 12 ~~or 13~~, wherein at least three of  $R_{15}$ ,  $R_{16}$ ,  $R_{17}$ ,  $R_{18}$ ,  $R_{19}$ , and  $R_{20}$  are independently a partial structure represented by the general formula (1) or (2).

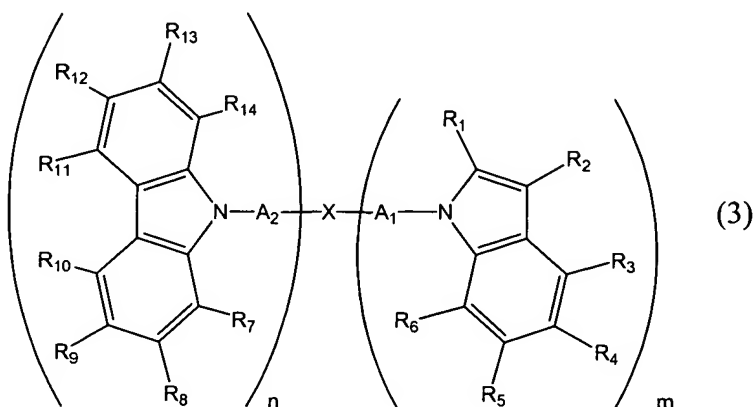
15. (Original) An organic compound having, in a molecule, at least one partial structure comprising an unsubstituted or substituted indole ring and at least one partial structure comprising an unsubstituted or substituted carbazole ring.

16. (Original) The organic compound according to claim 15, wherein the partial structure comprising the unsubstituted or substituted indole ring is represented by the following general formula (1), and the partial structure comprising the unsubstituted or substituted carbazole ring is represented by the following general formula (2):



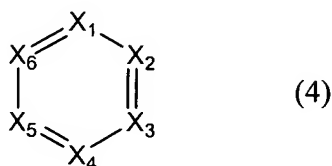
wherein  $A_1$  and  $A_2$  independently represents a single bond, an unsubstituted or substituted arylene group, or an unsubstituted or substituted divalent heterocyclic group; and  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_5$ ,  $R_6$ ,  $R_7$ ,  $R_8$ ,  $R_9$ ,  $R_{10}$ ,  $R_{11}$ ,  $R_{12}$ ,  $R_{13}$ , and  $R_{14}$  are independently selected from an hydrogen atom, a halogen atom, a linear or branched alkyl group having 1-20 carbon atoms (wherein one methylene group or two or more non-adjacent methylene groups of the alkyl group may be replaced by -O-, -S-, -CO-, -CO-O-, -O-CO-, -CH=CH-, or -C≡C-, or one or more methylene groups may be replaced by an unsubstituted or substituted arylene group or an unsubstituted or substituted divalent heterocyclic group, and a hydrogen atom in the alkyl group may be replaced by a fluorine atom), an unsubstituted or substituted aryl group, and an unsubstituted or substituted heterocyclic group, and adjacent ones of  $R_3$ ,  $R_4$ ,  $R_5$ ,  $R_6$ ,  $R_7$ ,  $R_8$ ,  $R_9$ ,  $R_{10}$ ,  $R_{11}$ ,  $R_{12}$ ,  $R_{13}$ , and  $R_{14}$  may be bonded together to form a ring.

17. (Original) The organic compound according to claim 16, which is represented by the following general formula (3):



wherein m and n are independently an integer of 1-5, and the sum of m and n is an integer of 2-6, and X is an unsubstituted or substituted, m+n valent organic group.

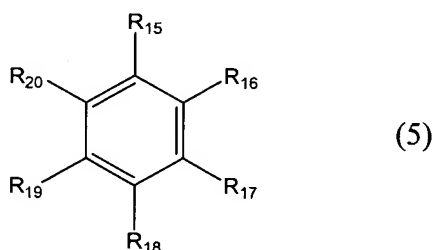
18. (Original) The organic compound according to claim 17, which is represented by the following general formula (4):



wherein  $X_1$  represents a nitrogen atom or C- $R_{15}$ ,  $X_2$  represents a nitrogen atom or C- $R_{16}$ ,  $X_3$  represents a nitrogen atom or C- $R_{17}$ ,  $X_4$  represents a nitrogen atom or C- $R_{18}$ ,  $X_5$  represents a nitrogen atom or C- $R_{19}$ ,  $X_6$  represents a nitrogen atom or C- $R_{20}$ ;  $R_{15}$ ,  $R_{16}$ ,  $R_{17}$ ,  $R_{18}$ ,  $R_{19}$ , and  $R_{20}$  is independently selected from an hydrogen atom, a halogen atom, a linear or branched alkyl group having 1-20 carbon atoms (wherein one methylene group or two or more non-adjacent methylene groups of the alkyl group may be replaced by -O-, -S-, -CO-, -CO-O-, -O-CO-, -CH=CH-, or -C≡C-, or one or more methylene groups may be replaced by an

unsubstituted or substituted arylene group or an unsubstituted or substituted divalent heterocyclic group, and a hydrogen atom in the alkyl group may be replaced by a fluorine atom), an unsubstituted or substituted aryl group, and an unsubstituted or substituted heterocyclic group, with the proviso that at least one of  $R_{15}$ ,  $R_{16}$ ,  $R_{17}$ ,  $R_{18}$ ,  $R_{19}$ , and  $R_{20}$  is a partial structure comprising an indole ring represented by the general formula (1) and at least another of  $R_{15}$ ,  $R_{16}$ ,  $R_{17}$ ,  $R_{18}$ ,  $R_{19}$ , and  $R_{20}$  is a partial structure comprising a carbazole ring represented by the general formula (2).

19. (Original) The organic compound according to claim 18, which is represented by the following general formula (5):



which corresponds to the general formula (4) in which  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$ ,  $X_5$ , and  $X_6$  are all not nitrogen.

20. (Currently amended) The organic compound according to claim 18 or 19, wherein at least three of  $R_{15}$ ,  $R_{16}$ ,  $R_{17}$ ,  $R_{18}$ ,  $R_{19}$ , and  $R_{20}$  are independently a partial structure represented by the general formula (1) or (2).



21. (Currently amended) The organic light-emitting device according to claim 3 ~~any one of claims 3 to 8~~, wherein the light-emitting layer comprises a plurality of phosphorescent materials.

22. (Currently amended) The organic light-emitting device according to claim 1 ~~any one of claims 1 to 14~~, which has the organic layer sandwiched by opposing two electrodes and emits light by application of a voltage between the electrodes.

23. (Original) An image display comprising the organic light-emitting device set forth in claim 22 and means for supplying an electric signal to the organic light-emitting device.